

REMARKS

Claims 1-42 are pending in the case. In the Office Action mailed September 10, 2004, the Examiner took the following action: (1) objected to the drawings due to informalities; (2) objected to the abstract due to informalities; and (3) rejected claims 1-42 under 35 USC § 102(a) as being anticipated by Sato et al. (U.S. 6,574,570 B1). Applicants respectfully request reconsideration and withdrawal of the rejections in view of the foregoing amendments and the following remarks.

I. Objection to the Drawings.

The Examiner objected to the drawings on grounds that Figure 4 contains only identification numerals and not actual text within the boxes of the flow diagram. Applicants submit concurrently herewith revised formal drawings which provide text within the boxes of the flow diagram, and therefore, respectfully request reconsideration and withdrawal of the objection to the drawings.

II. Objection to the Specification.

The Examiner objected to the abstract on grounds that the use of the phrase “are provided” may suggest purported merits of the invention. Applicants have revised the abstract to correct this objectionable aspect of the abstract, and therefore, respectfully request reconsideration and withdrawal of the objection to the abstract.

III. Rejection of claims 1-42 under 35 USC § 102(a) as being anticipated by Sato.

The Examiner rejected claims 1-42 under 35 USC § 102(a) as being anticipated by Sato et al. (U.S. 6,574,570 B1).

As amended, claim 1 recites a method of analyzing flutter test data, the method comprising reading a plurality of data sets, each data set including a plurality of data points recorded by a corresponding measurement device, each data point representing an amplitude versus a test time; determining a number “N” of damped sine waves to fit to each of the data sets of data points; simultaneously fitting the number “N” of damped sine waves to the plurality of data sets; and determining a set of modal frequency and damping values based on the simultaneous fitting of all of the data sets.

Sato et al. (U.S. 6,574,570 B1)

Sato teaches a method for analyzing nonlinear restoring force characteristics with hysteresis of a machine structure system. More specifically, Sato teaches creating a frequency response by fitting a number “N” of damped sine waves to a plurality of data points (6:41-46; Figs 2(b) and 2(c)).

Sato fails to disclose, teach, or fairly suggest the inventive methods taught by Applicants. More specifically, Sato fails to teach or suggest methods including *simultaneously fitting the number “N” of damped sine waves to the plurality of data sets*, and *determining a set of modal frequency and damping values based on the simultaneous fitting of all of the data sets*, as recited in claim 1. Applicants do not teach or suggest working in the frequency domain, as taught by Sato.

For the foregoing reasons, Applicants respectfully submit that Sato fails to disclose, teach or fairly suggest the method recited in claim 1. By analogous reasoning, Sato also fails to teach or fairly suggest the inventions recited in claims 12, 23, and 34.

Similarly, claims 2-11, 13-21, 24-33, and 35-42 depend from claims 1, 12, 23, and 34, and are not anticipated by Sato for the reasons set forth above, and also due to additional limitations contained in those claims. For example, claim 11 recites the method of claim 1 wherein reading a plurality of data sets includes selecting the plurality of data sets based on whether the data set can be modeled as a series of damped sine waves. Similarly, claim 7 recites the method of Claim 6, wherein assessing a significance of a sine wave mode includes determining an amplitude factor for the sine wave mode. Claim 8 recites the method of Claim 6, wherein assessing a significance of a sine wave mode includes determining an amplitude factor for the sine wave mode, the amplitude factor being a function of a ratio of an amplitude over an amplitude range of the sine wave mode. Claim 9 recites the method of Claim 8, wherein assessing a significance of a sine wave mode further includes determining the sine wave mode to be insignificant when the amplitude factor is less than or approximately equal to an average error value. And claim 10 recites the method of Claim 8, wherein assessing a significance of a sine wave mode further includes determining the sine wave mode to be insignificant when the amplitude factor is less than or approximately equal to a square root of an average error value squared. These additional limitations are also not disclosed, taught, or fairly suggested by Sato.



CONCLUSION

For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the rejections of claims 1-42. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to call the undersigned at his convenience.

Respectfully submitted,

BLACK LOWE & GRAHAM^{PLLC}



Dale C. Barr

Registration No. 40,498

Direct Dial: 206.957.2463

Enclosures:

Revised Formal Drawings

MAIL CERTIFICATE

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BLACK LOWE & GRAHAM^{PLLC}



701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301